

CLAIMS

What we claim is:

1. A vector comprising a nucleic acid molecule encoding at least one non-toxic T-cell epitope of the E6 and/or E7 antigen of a strain of human papilloma virus (HPV) associated with cervical cancer and a promoter operatively coupled to said nucleic acid molecule for expression of the nucleic acid molecule in a host to which the vector is administered.
2. The vector of claim 1 wherein said promoter is a cytomegalovirus promoter.
3. The vector of claim 1 wherein said nucleic acid molecule is contained within plasmid CMV-3.
4. The vector of claim 1 wherein said nucleic acid molecule is an E7 antigen coding sequence detoxified to prevent oncogene replication in the host.
5. The vector of claim 4 wherein said detoxification is effected by removing from the native sequence nucleic acid encoding amino acids 21 to 26 of HPV-16.
6. The vector of claim 5 wherein said vector has the identifying characteristics of pCMV-dE7.
7. The vector of claim 1 wherein said nucleic acid molecule encodes E7 antigen epitopes comprising amino acids 11 to 20, 49 to 57, 82 to 90 and 86 to 93 and E6 antigen epitope comprising amino acid 29 to 38 of HPV-16.
8. The vector of claim 7 wherein said nucleic acid molecule has SEQ ID No. 4 or 5.
9. The vector of claim 7 wherein said nucleic acid molecule encodes an amino acid sequence having SEQ ID No: 6.
10. The vector of claim 7 wherein said vector has the identifying characteristics of pCMV3-HPVT#1.

11. An immunogenic composition for *in vivo* administration to a host comprising a vector as claimed in claim 1.

12. A method of immunizing a host against cervical cancer caused by human papilloma virus (HPV), which comprises administering to the host an effective amount of the immunogenic composition of claim 11.

13. A method of treatment of a host having cervical cancer caused by human papilloma virus (HPV), which comprises administering to the host an effective amount of the immunogenic composition of claim 11.